Maximizing the research impact of your publications

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Overview

- Research impact and the RQF
- Journal impact factors
- Tracking citations
- Open Access Repositories
- The deposit process
- Searching
- Your thesis too?

Research Impact

- Once upon a time we measured research output by number of publications
- Then we switched to weighting the publications by the importance of the journal or conference it was published in
- Then journal impact factors were invented
- And now we are looking to research impact possibly measured by citations

Natural progression

- Number of publications is very crude
- Importance of publisher is better
- Journal impact factors are better still since quantifiable
- But what we are really after is: Does anyone read what we write, and how many of them value it? Does it influence science or industry? In other words what is the impact of our research?

Graduate Research candidature

- As a GR candidate, your publications matter most in gaining the degree. Subsequent concerns are secondary.
- But examiners care and will judge any publications you achieve the way they know best.
- You should also start behaving like a mature researcher, since the habits will carry on into your post-PhD career.

Publication aim

- To gain as much research impact as possible, which includes citations (but also industry impact etc.
- Consequently to publish in the highest impact (best quality) journal that will accept your paper…
- Readership volume usually equates with quality, but beware over-specialization.

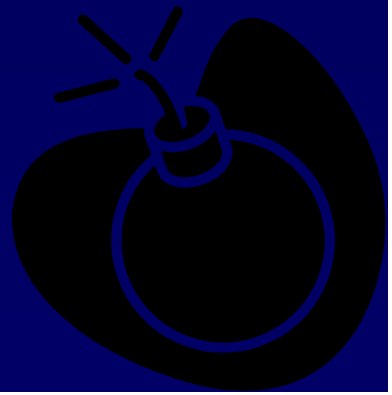
Journal Impact Factors

Invented by Garfield (1996) to "permit reasonable comparison between large and small journals"

JIF for journal X in year Y =

(no of citations in year Y of articles published as below)
(no of articles published in years Y-1 and Y-2)

Let's look at some in the Web of Knowledge taking the long way http://www.utas.edu.au/



Crude research impact

- Weight each article in your *cv* by JIF
- Crude because not every article in journal *X* achieves JIF_X citations. Indeed most achieve none. Some achieve a lot.
- So JIF is a rough quantifiable measure of the 'importance' of a journal in the field of interest. Useful in deciding where to publish (evidence that *X* is read), but don't *depend* on it to deliver impact.

Citations

- People are turning to citations as a measure of research impact.
- A citation is proof that someone read your paper, and thought enough about it that they were prepared to cite it in one of their own.
- Beware self-citation…
- Some papers are cited because they are falsified, but this does not distort the general picture.

Scientometrics

Let's look at some citation tools

Google Scholar http://scholar.google.com/

Web of Knowledge
http://www.utas.edu.au/library/info/dbase/dbases4.html#w

Citebase http://www.citebase.org/

MathSciNet
http://www.ams.org/mathscinet/

Drawbacks

- **Negative citation:** a work is cited to criticize or correct
- **Self citation:** an author cites their own work
- **Preferential citing of "short report" in a prestigious journal** (eg Nature, Science) to "comprehensive paper in speciality journal"
- **Journal referees' recommendations** to authors who have submitted work, to include reference to the referees' work
- **Restrictions on length imposed by journal editors** resulting in an author culling the number of citations s/he provides.
- **Citation circles or cabals**: friends citing friends
- **Serials dependent discipline**: researchers in different disciplines vary in how much they communicate through serials.

Not being cited?

- **Work doesn't have to be cited** to have influenced someone else's work, particularly industrially or socially.
- **Delayed recognition** - although work is cited most in the 10 years after its publication, some work is not picked up on for a considerable time.
- "**Obliteration by incorporation**" **I** - review articles tend to be cited in preference to the individual papers reviewed.
- "**Obliteration by incorporation**" **II** - incorporation into a subject's accepted knowledge to be quoted without the need for citation.
- **Prolific authorship** may not result in any heavily cited article or book but can produce an "important cumulative impact".

Citing Half-life

- The citing half-life is the median age of articles cited by articles in the journal in a year.
- For example, in 2003, *Food Biotechnology* has a citing half-life of 9·0. That means that 50% of all articles cited by articles in *Food Biotechnology* in 2003 were published in the nine years 1995 to 2003 (inclusive).
- This gives a measure of how far references in the journal generally go back. It also reflects on the field, and the currency of research.

Open Access Repositories

Subscription journals are accessible to only a fraction of the world's researchers. This was understandable in the days when paper journals were all there was.

No university can afford all journals!

The concept of open access is to remove the subscription barrier, and make your research accessible to anyone with an Internet connexion.

Why Open Access?

More readers, and earlier readers translate into more citations (and more impact).

Well-established research suggests that the citation rate increases by 50% to 500% depending on the discipline, if an article is freely available on the Web.

Repositories provide a more convenient way of achieving this than personal web sites.

Early Open access

- A good fraction of the OA advantage is attributable to early access – seeing the research while it is still live.
- OA downloads are correlated to citations, and the evidence suggests about 50% of citations occur shortly after publication (even before publication!)

Why not?

Laziness. It's avoidable work.

Ignorance – how do I do it?

Confusion about copyright, as a convenient excuse.

93% of journals permit self-archiving of research papers. **Only 7% do not.**

Research suggests that only 5% of researchers would actually consider refusing to self-archive their papers.

The alternatives

Open Access Journals (~25%) publish electronically and freely (to the reader) using different business models from Subscription Journals

See for example First Monday http://www.firstmonday.org/

Or see the Directory of OA Journals (DOAJ) http://www.doaj.org/

Other alternatives are Delayed Access Journals, and Optional OA Journals. Much experimentation…

Depositing a document

Suppose you have a paper which has just been accepted. How do you go about putting it in the UTas repository?

First make sure you have the final submission file (*postprint*).

Then list some keywords and key phrases that people might use to look up the paper.

Make sure you have all the journal data available like the title, publisher, etc.

Registration

You need to be a registered user. On our prototype this means you need to register (once).

When the University get going in say 2 months, you may be automatically registered.

Let's demonstrate

I'll upload this presentation (even though it is not a published paper, it will show the principles). You can download it if you want later – please do.

http://eprints.comp.utas.edu.au:81/

NOTE: I've converted the ppt presentation to a pdf file for uploading purposes, and I've written an abstract and keywords for it.

Searching…

Scholarly search engines are more targeted than raw Google:

Scirus http://www.scirus.com/srsapp/

Google Scholar
http://scholar.google.com/

Windows Live Academic (Microsoft)
http://academic.live.com/

National gateways

- Arrow Discovery Service – incomplete but growing http://search.arrow.edu.au/apps/ArrowUI/
- Australasian Digital Theses – 32 of 39 universities in Australia + 1 of 8 in New Zealand http://adt.caul.edu.au/
- Similar portals in several other countries, eg Canada.

What happened to it?

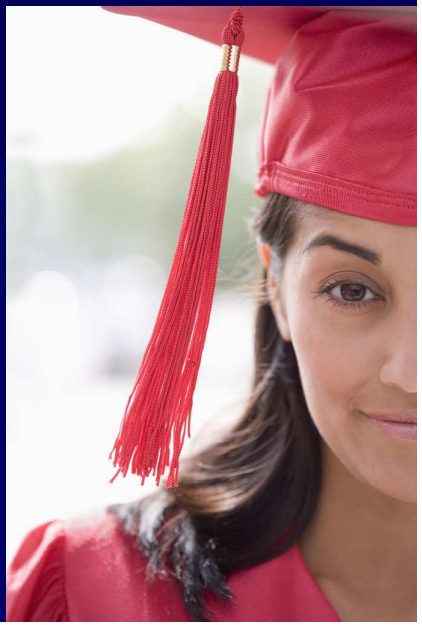
Look at the statistics!

Tells you where it was accessed from, history over time, and download ranking.

Let's try http://eprints.comp.utas.edu.au:81/es/index.php?action=show_detail_eprint;id=227;year=0;month=0;range=4w

Your thesis too?

- Australia has a national scheme for making GR theses available to all, subject to usual restrictions.
- The **Australian Digital Theses** (**ADT**) website is at http://adt.caul.edu.au/.
- So far 14 Australian universities (of 39) have decided to make depositing an e-copy of the thesis a requirement. UTas is considering this step.



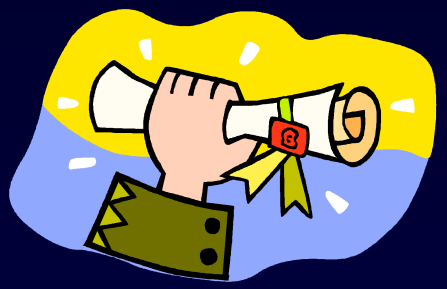
What should I do?

Before graduation, you will be required to deposit final bound copies of your thesis with the Graduate Research Unit.

At the same time, provide them with an electronic copy of the files. Preferably a single pdf file on a CD, but the Library can cope with almost anything.

The same conditions for access apply as for the print copy (which no-one reads).

Consequences



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- You may get email enquiries about your research from national and international researchers.
- Your thesis may be cited. (++ outcome)
- Your prior claim to the research work is established by the upload date.

Questions & discussion

The End

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